

THE WHITE HOUSE
WASHINGTON

December 8, 1982

Not referred to DOC. Waiver
applies.

Dear Lionel,

Considering the many discussions that have ensued about the request for export of the HYSHARE 700 computer to the People's Republic of China, I feel compelled to explain my strong support for this request.

The primary issue is not the intrinsic technology level of the hardware, which is mid-1970's vintage, but the enhanced system capability provided by the HYSHARE 700. It incorporates analog computers with twice the capability contained in a downgraded version that is currently approved for export to the PRC.

However, while this expanded system capability does offer the potential for practical solution of more complex problems, it is my opinion that honoring this request would have little impact on their military capability. Facilitating their missile trajectory calculations hardly compromises our own strategic interests. Their ballistic missiles represent a "force de frappe" to deter the Soviet Union, albeit to a marginal degree. If we choose to reject every request of potential military value, regardless of its significance, then I question how the President's directives to implement a more liberal export control policy toward China can be achieved. Export of the HYSHARE 700 computer does not entail "major risks to our national security" and is thoroughly consonant with my interpretation of the President's export control policy for the PRC. Considering the great importance of maintaining and extending U.S. relations with the People's Republic, I strongly recommend approval of this request.

Very truly yours,

G. A. Keyworth

Science Advisor to the President

The Honorable Lionel H. Olmer
Under Secretary for International
Trade
Department of Commerce
Washington, D.C. 20230

DEC 14 4 05 PM '82

EXPORT ADMINISTRATION REVIEW BOARD

January 17, 1983

Participants

Secretary Baldrige, Chairman
Secretary Shultz
Secretary Weinberger
CIA Director Casey
Science Advisor Keyworth
Assistant Secretary Celand (for Secretary Regan)
Gus Weiss, NSC (for Judge Clark)

Additional Attendees

Under Secretary Olmer
Assistant Secretary Perle, Defense
Assistant Secretary Wolfowitz, State
David Laux, NSC
[redacted] CIA
David Griese, CIA
Jonathan Howe, State
Michael E. Zacharia, Commerce (Notetaker)

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Attachment B

Analysis of Attached Charts

Chart 1 illustrates the increasing number of cases received and approved for the years 1979 through 1982. The chart, however, says nothing about the level of sophistication of the cases which have been approved nor the types of conditions that may have been imposed on licenses to the PRC.

Chart 2 shows that the PRC two-times guideline has been applied to only 32 product categories out of a potential 400 plus categories which might pertain to products being exported to the PRC. This means that Commerce and Defense have only agreed upon the application of the two-times policy in these 32 categories, and all other product categories require a case-by-case review. Although there is some agreement on the application of the two-times policy in 17 CCL entries, it does not mean that an entire CCL entry is covered by the two-times policy. For example, in the CCL entry 1529, Electronic Instruments, there are as many as 15 major product sub-categories, but for only 4 is there an agreement to apply the two-times policy.

Eighty percent of all PRC licenses received fall within 10 CCL entries (see chart 3). Seventy-five percent of the cases fall into only 6 of the CCL entries, with computers (CCL 1565A) comprising almost 41 percent of all applications received. Again, as stated earlier and as shown on chart 3, even in those instances where the two-times benchmark is applied to a given CCL entry, it does not address all the products within that entry.

Exports of computers (CCL 1565A) are treated quite differently from exports to either the USSR or the Free World. For example, 14 different technical parameters are used in determining whether a given computer system will be licensed to the PRC. In contrast, only 2 parameters, bus rate and processing data rate, are used for determining which computers may be exported to various Free World countries. Computers requested for export to the PRC are subject to a far more time-consuming stringent review which considers 12 additional technical parameters beyond bus rate and processing data rate. Charts 4 and 5 show 3 of those additional parameters. Chart 4 shows that the two-times policy does apply to the size of internal memory, yet this level of sophistication is dramatically less than what can be licensed to the Free World. The size of the graphic display is less than two-times that of

- 2 -

the USSR and considerably less than for the Free World. Chart 5 also shows that performance speed of disk memory commodities exported to the PRC are less than two-times that of the USSR, and once again, dramatically less than disk memory devices that can be licensed to the Free World. The two-times policy, even in those instances where it has been successfully implemented, usually allows for the licensing of commodities to the PRC which are dramatically less technically sophisticated than those commodities licensed to the Free World, including countries like India or Yugoslavia.

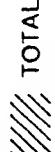
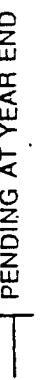
Chart 6, Mask Alignment Equipment, which is used for microcircuit semiconductor production, illustrates a case where two-times is not meaningful because all such equipment is denied export to the USSR. Because the two-times policy cannot be applied, an agreement between Defense and Commerce was reached to establish that the manufacture of 4K memory chips would be the standard, but chips between 4K and 16K would be decided on a case-by-case basis. This is in contrast to the Free World availability of 64K chips and the capacity to produce them. The capacity to produce 256K chips which is now developing in several countries, will also become widespread.

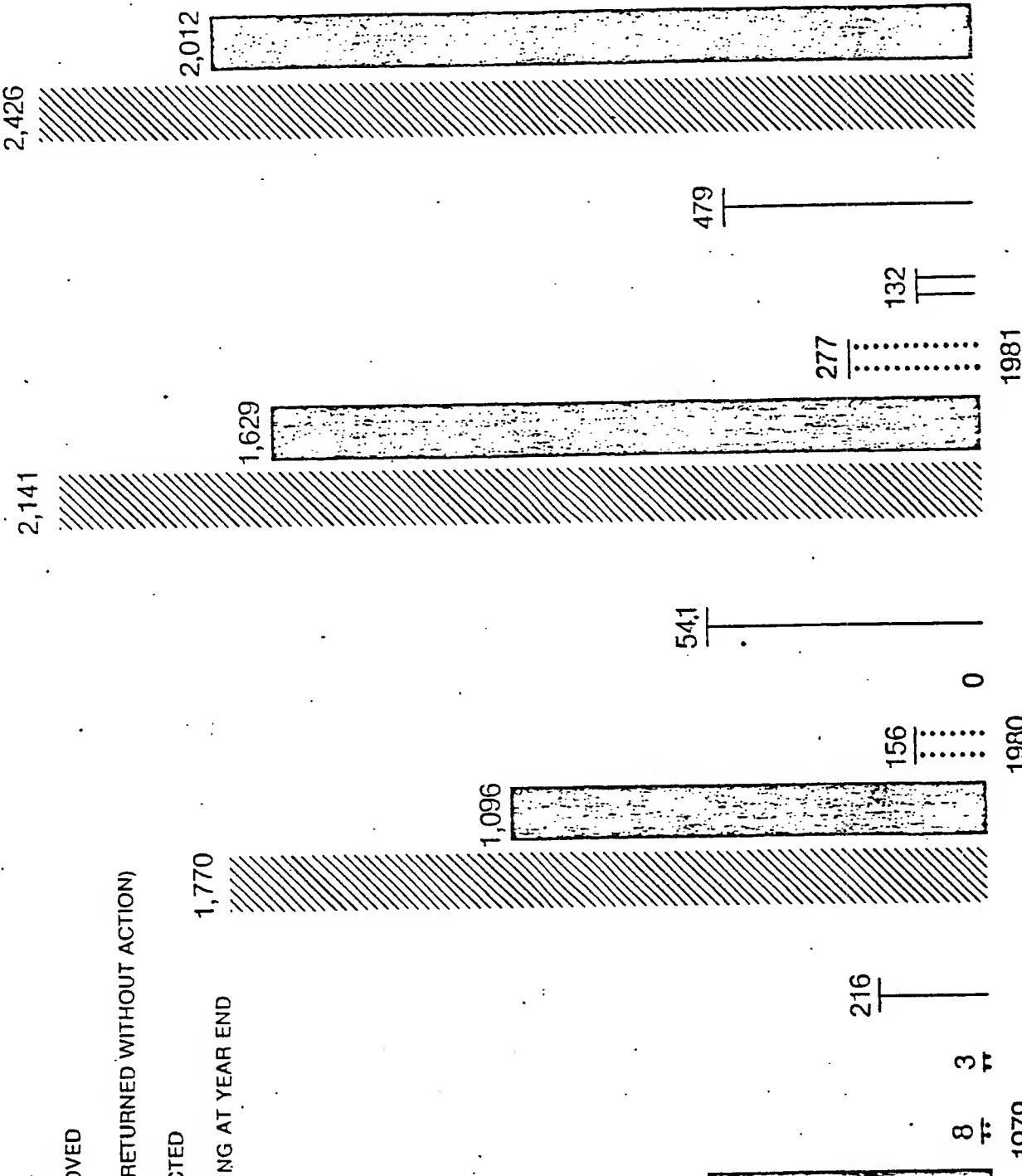
Chart 7 illustrates how the two-times policy would apply to A-to-D converters. It also dramatically demonstrates the disparity between products licensed for the PRC and those for the Free World. An A-to-D converter is a microcircuit essential in converting analog information into a digital format. Although the PRC two-times benchmark is 100 kilohertz, the state-of-the-art for the Free World is 50,000 kilohertz or 500 times that of the PRC.

Chart 8 illustrates an example where the PRC benchmark and the USSR benchmark is the same. Oscilloscopes below 100 megahertz are not controlled to any country. For the PRC, exceptions can be granted for up to 250 megahertz or that slightly above oscilloscopes licensed to the USSR. However, the 250 megahertz guideline may be appropriate, because oscilloscopes in higher ranges are widely used for nuclear development.

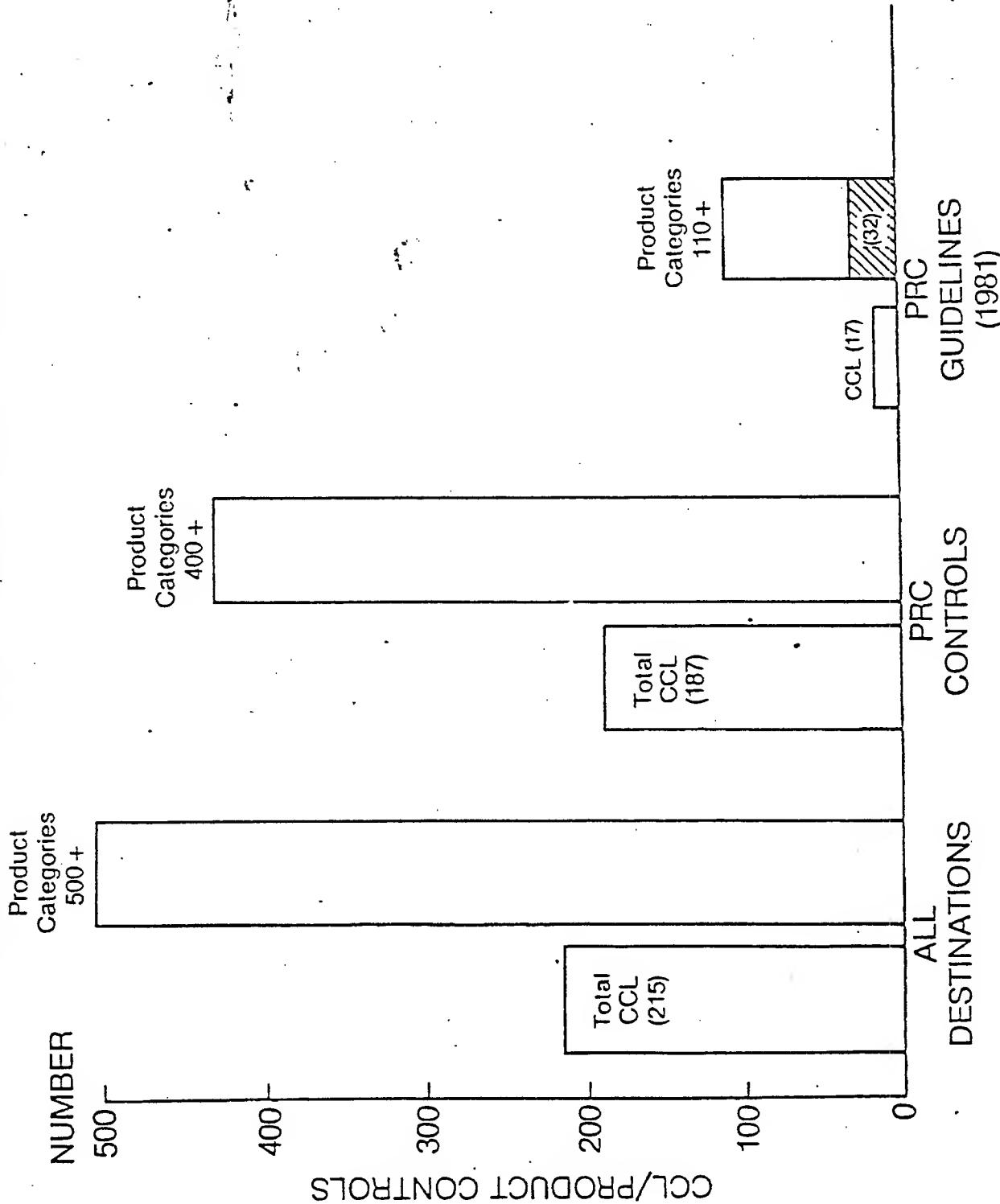
In essence, the commodities shown in the charts are from the most active PRC commodity license application areas. They indicate that the two-times policy, in some instances, cannot even be applied and, in instances where it is applied, it does not usually represent a major "liberalization" of the licensing decisions, especially when contrasted to the treatment of the same commodities going to the Free World, Yugoslavia, or India.

CHINA: DISPOSITION OF U.S.
EXPORT CASES — 1979-82

| | |
|---|-----|
|  TOTAL | 663 |
|  APPROVED | 650 |
|  RWA (RETURNED WITHOUT ACTION) | 8 |
|  REJECTED | 3 |
|  PENDING AT YEAR END | 216 |



COMPARISON OF CONTROLLED ENTRIES
TO ALL DESTINATIONS AND TO PRC



= DENOTES ONLY PORTION
OF PRODUCTS COVERED
BY GUIDELINES

TOP 10 CCL ENTRIES FOR PRC

| <u>CCL ENTRIES</u> | <u>PRC GUIDELINES</u> |
|-------------------------------------|-----------------------|
| o COMPUTERS (1565A) | YES |
| o COMPUTERIZED INSTRUMENTS (4529B) | NO |
| o MICROCIRCUITS (1564A) | YES |
| o ELECTRONIC INSTRUMENTS (1529A) | YES |
| o RECORDING EQUIPMENT (1572A) | YES |
| o SEMICONDUCTOR PRODUCTION (1355A) | YES |
| o OSCILLOSCOPES (1584A) | YES |
| o AVIONICS/NAVIGATION/RADAR (1501A) | NO |
| o LASERS (1522A) | NO |
| o MICROWAVE EQUIPMENT (1537A) | NO |

- o TOP 10 CCL ENTRIES:

80%

OF ALL CASES RECEIVED

- o TOP 6 CCL ENTRIES

75%

OF ALL CASES RECEIVED

- o PRC GUIDELINES DID NOT ADDRESS ALL PRODUCTS WITHIN THE CCL

COMPUTER

(CCL-1565A)

TWO TECHNICAL FACTORS FOR LICENSE DETERMINATIONS

MEGABYTES



SIZE OF INTERNAL MEMORY

8.0

8

6

4

2

0

0.8

2.1

PRC

FREE

WORLD

PRC

FREE

WORLD

PRC

FREE

WORLD

INCHES



SIZE OF GRAPHIC DISPLAY

25

20

15

10

14

19

25

PRC
GUIDELINES
USSR/
BLOC
FREE
WORLD

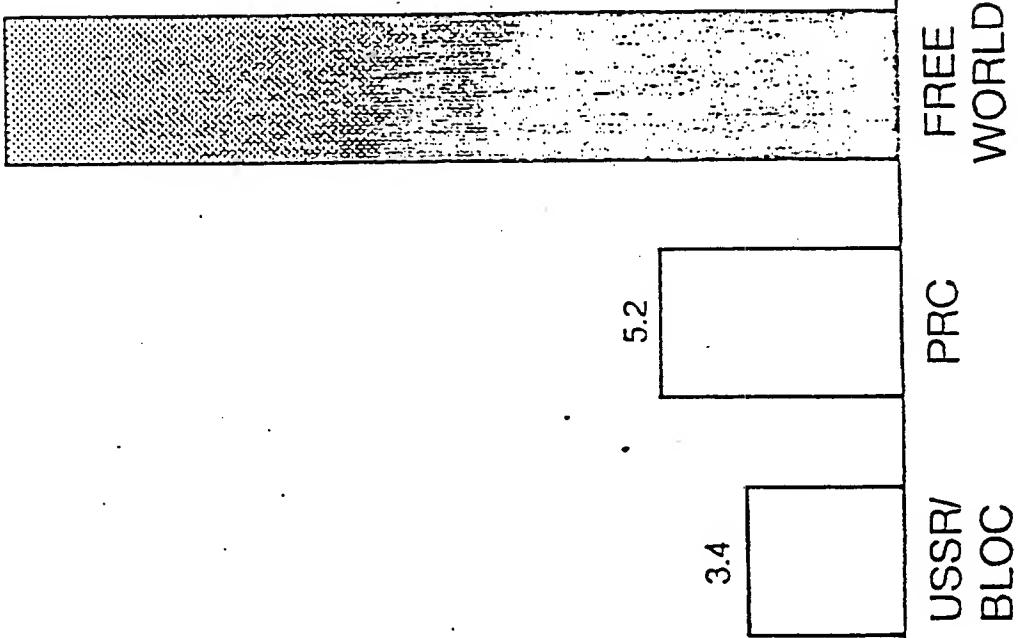
5

DISK MEMORY
(CCL-1565A)

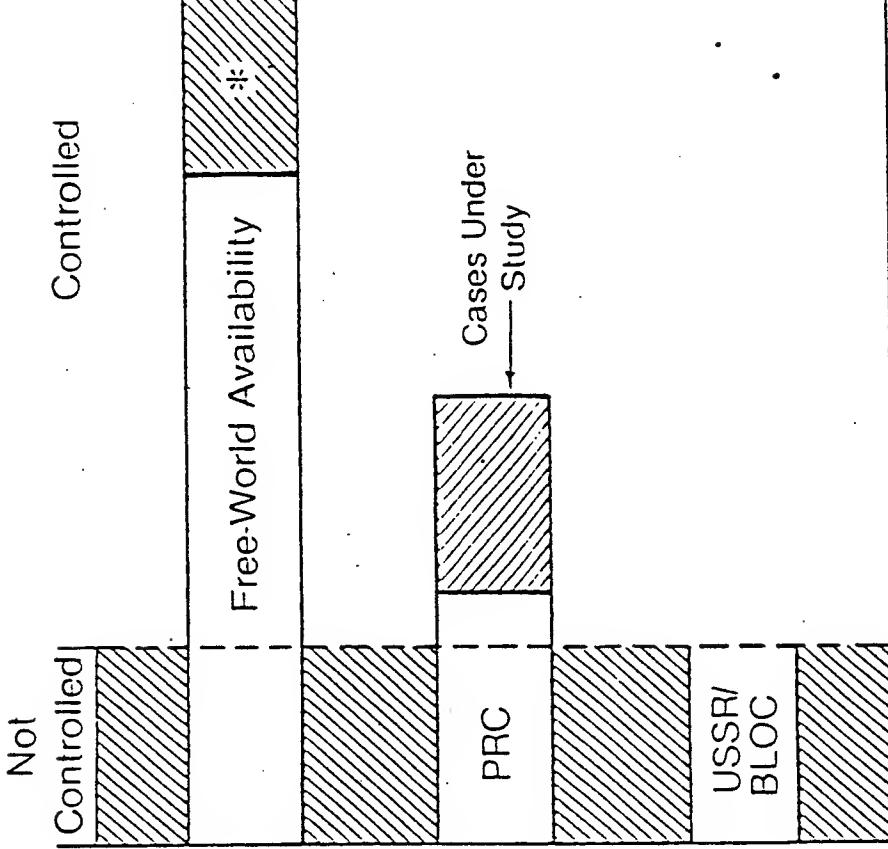
MEGABITS
(Per Second)

STATE OF ART

20



MASK ALIGNMENT EQUIPMENT (CCL 1355A: MICROCIRCUIT PRODUCTION)



PRODUCTION CAPABILITY

| | 4K | 8 | 16 | 32 | 64 | 1000K | = Memory Chip (Bit Size) |
|--|----|---|----|----|----|-------|-----------------------------------|
| | | | | | | | = Microprocessor Chip (Word Size) |

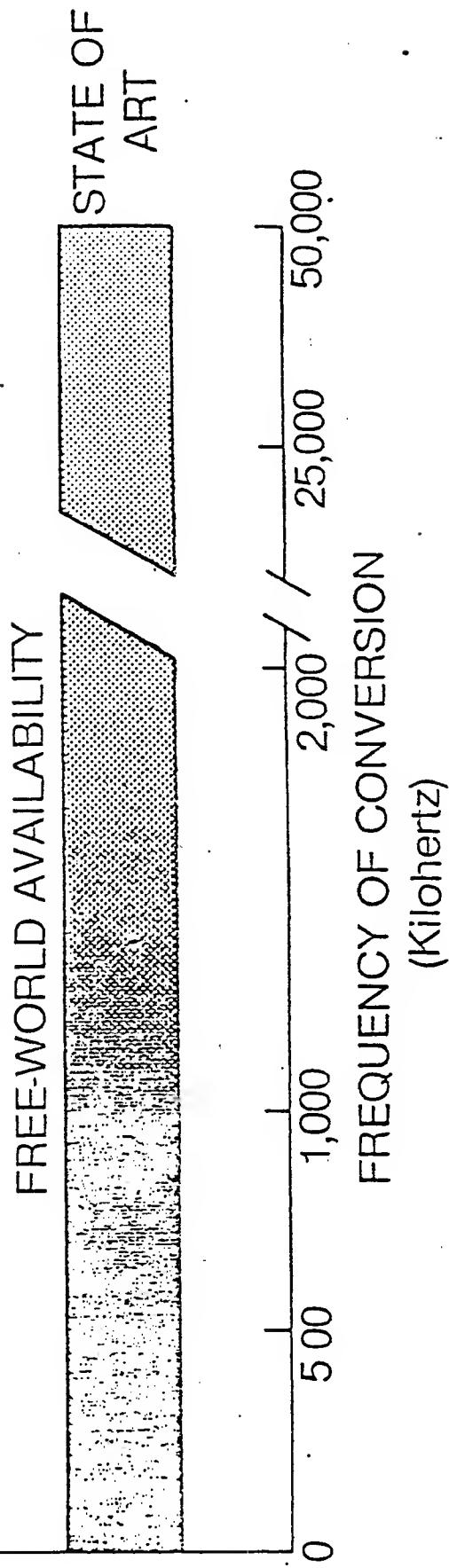
*64K Equipment can be used to produce 256K RAMs but not in mass production.

A-to-D CONVERTERS
(CCL-1564)

COUNTRY
GROUPING

USSR/BLOC $\chi = 50$.

PRC: $2\chi = 100$



OSCILLOSCOPES
(CCL-1584A)

